UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,725	05/08/2001	Bernard Yeh	042390.P11508	3637

59796 7590 05/27/2008

INTEL CORPORATION
c/o INTELLEVATE, LLC
P.O. BOX 52050
MINNEAPOLIS, MN 55402

EXAMINER	
BENGZON, GREG C	
ART UNIT	PAPER NUMBER
2144	

MAIL DATE	DELIVERY MODE
05/27/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BERNARD YEH, BUFORD M. GUY III,
MOHAMMED B. ZAIDI, AND SAIKAT ROY SAHAROY

Appeal 2007-3433
Application 09/851,725[1]
Technology Center 2100

Decided: May 27, 2008

Before JOSEPH L. DIXON, ALLEN R. MACDONALD, and CAROLYN D. THOMAS, *Administrative Patent Judges*.

THOMAS, C., *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a final rejection of claims 1-30 mailed May 12, 2006. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

---

[1] Application filed May 8, 2001. The real party in interest is Intel Corporation.

A. INVENTION

Appellants invented a system, method, and sets of instructions that relate to multi-computer systems performance testing. The computer system under test executes server and client code and transmits data packets according to one or more standard network communications protocols. Thread execution time is tracked along with the number of transactions completed between the execution of server code and the execution of client code. With this data, the performance of the computer system acting solely as a server or as a client can be determined. (Spec., Abstract.)

B. ILLUSTRATIVE CLAIM(S)

The appeal contains claims 1-30. Claims 1, 3, 9, 11, 17, and 27 are independent claims. Claims 1 and 3 are illustrative:

1. A protocol performance test method, comprising:

measuring performance of a multi-computer communication protocol on a single computer system, wherein said single computer system emulates a network configuration having a server and a client, and wherein measuring said performance of said multi-computer communication protocol on said computer system includes,

executing server code on said single computer system;

executing client code on said computer system; and

measuring performance data for said single computer system.

3. A protocol performance test method, comprising:

operating a computer system under test as a server and a client to emulate a network configuration;

executing server code on said computer system under test according to a multi-computer communication protocol;

executing client code on said computer system under test according to said multi-computer communication protocol; and

determining performance data for said computer system under test.

C. REFERENCES

The references relied upon by the Examiner in rejecting the claims on appeal are as follows:

Yu	US 5,636,371	Jun. 3, 1997
Fletcher	US 6,269,401 B1	Jul. 31, 2001 (Filed Aug. 28, 1998)
Cota-Robles	US 2001/0056456 A1	Dec. 27, 2001 (Filed Dec. 27, 2001)

D. REJECTIONS

The Examiner entered the following rejections which are before us for review:

Claims 1-6, 9-14, 17-20, and 29-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fletcher in view of Yu; and

Claims 7, 8, 15, 16, and 21-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fletcher in view of Yu and further in view of Cota-Robles.

II. PROSECUTION HISTORY

Appellants appealed from the Final Rejection and filed an Appeal Brief (Br.) on October 23, 2006. The Examiner mailed an Examiner's

Answer (Ans.) on January 16, 2007. No Reply Brief is indicated in the record.

III. ISSUE

Whether Appellants have shown that the Examiner erred in rejecting claims 1-30 as being obvious over the combination of cited references.

IV. FINDINGS OF FACT

The following findings of fact (FF) are supported by a preponderance of the evidence.

Claim Construction

1. The Specification discloses that "a single computer system" is defined as the server computer system or one of the client computer systems (3:7-8.)

2. The Specification discloses that the "computer system under test 31 . . . includes at least one processor 31a and memory 31b." (5:12-13.)

3. The Specification discloses that "data packets are transferred between the execution of server and client threads through sockets. A socket is a software concept known in the art that provides a communication input/output for software code execution." (6:12-14.)

Fletcher

4. Fletcher discloses that "concurrently with the collection of the network performance statistics, system information is collected by each host computer system regarding its own capabilities and performance. In other words, client computer system 110 measures and stores system information

regarding its capabilities and performance, and server computer system 250 measures and stores system information regarding its capabilities and performance." (Col. 24, ll. 19-26.)

5. Fletcher discloses a "method for monitoring communication performance in a communication network . . . In one embodiment, a computer system of a communication network measures . . . network performance statistics . . . The computer system also measures . . . system performance statistics and system parameters." (Abstract.)

6. Fletcher discloses that "a host computer system (e.g., client computer system 110 or server computer system 250) measures and stores network performance statistics. The host computer system also measures and stores historical information including system information consisting of system performance statistics and system parameters." (Col. 6, ll. 38-43.)

Yu

7. Yu discloses that a "local host data processing system operating under the control of a local host operating system includes components of a hosted operating system. . . . Host and hosted operating systems share the same TCP/IP network protocol stack. A virtual network mechanism is configured within the local host system to be operatively coupled to the host network protocol stack and provide access to well-known port application programs." (Abstract.)

8. Yu discloses that "the host system also includes the components of a hosted operating system components, such as for example, an emulator." (Col. 3, ll. 7-9.)

9. Yu discloses that the "emulated system is a multiprogrammed multiprocessor system. The facilities illustrated in Fig. 1 include a listener module **280**, a file management facility **282**, a socket monitor call command handler unit 284, and an ES socket library **286** which are arranged as shown." (Col. 6, ll. 37-42.)

10. Yu discloses that a "command handler unit (not shown) contains the routines that respond to user commands entered via a terminal or program. In response to such commands, the command handler unit routines invoke the appropriate tasks for executing such commands." (Col. 6, l. 67 to col. 7, l. 4.)

11. Yu discloses that "the components **92** through **98** collectively can be viewed as a socket server for emulator **80** which is used to communicate over the host system socket layer." (Col. 8, ll. 25-28.)

12. Yu discloses that "the teachings of the present invention are not limited to requiring that the other system or party to the communications, typically an executing client program, be located in a physically separate computer system. The communications could take place between the host system and one of the hosted systems . . . ." (Col. 4, ll. 14-19.)

V. PRINCIPLES OF LAW

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. See *In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary

indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S. Ct. at 1734 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.")

The reasoning given as support for the conclusion of obviousness can be based on "interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art." *KSR*, 127 S. Ct. at 1740-41. *See also Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2007).

We note our reviewing court has recently reaffirmed that:

> [A]n implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the 'improvement' is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter,

> smaller, more durable, or more efficient. Because the desire to enhance commercial opportunities by improving a product or process is universal-and even common-sensical-we have held that there exists in these situations a motivation to combine prior art references even absent any hint of suggestion in the references themselves. In such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him *capable* of combining the prior art references.

Leapfrog Enters., Inc. v. fisher-Price Inc., 485 F.3d 1157, 1162 (holding it "obvious to combine the Bevan device with the SSR to update it using modern electronic components in order to gain the commonly understood benefits of such adaptation, such as decreased size, increased reliability, simplified operation, and reduced cost.")

VI. ANALYSIS

Grouping of Claims

In the Brief, Appellants argue claims 1-6, 9-14, 17-20, and 29-30 as a group (Br. 6-13). In other words, for each of independent claims 1, 3, 9, 11, 17, and 27, Appellants merely repeat the same argument. Thus, the Board selects representative claim 1 to decide the appeal for this group. 37 C.F.R. § 41.37(c)(1)(vii)(2006). Accordingly, the remaining claims in this group stand or fall with claim 1.

Appellants argue claims 7, 15, and 21 as a group (Br. 13). However, for claims 7, 15, and 21, Appellants merely repeat the same argument made for claim 1. We will, therefore, treat claims 7, 15, and 21 as standing or falling with claim 1.

Appellants argue claims 8, 16, and 22 as a group (Br. 13-14). However, for claims 8, 16, and 22, Appellants merely repeat the same argument made for claim 1. We will, therefore, treat claims 8, 16, and 22 as standing or falling with claim 1.

Appellants argue claims 23-28 as a group (Br. 14-15). However, for claims 23-28, Appellants merely repeat the same argument made for claim 1. We will, therefore, treat claims 23-28 as standing or falling with claim 1.

See 37 C.F.R. § 41.37(c)(1)(vii). *See also In re Young,* 927 F.2d 588, 590 (Fed. Cir. 1991).

The Board's Claim Construction

"Our analysis begins with construing the claim limitations at issue." *Ex Parte Filatov*, No. 2006-1160, 2007 WL 1317144, at *2 (BPAI 2007).

Claims are given their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

Our reviewing court stated in *Phillips v. AWH Corp.,* 415 F.3d 1303, 1315 (Fed. Cir. 2005), *cert. denied*, *sub nom. AWH Corp. v Phillips*, 126 S. Ct. 1332 (2006):

> The claims, of course, do not stand alone. Rather, they are part of 'a fully integrated written instrument,' *Markman*, 52 F.3d at 978, consisting principally of a specification that concludes with the claims. For that reason, claims 'must be read in view of the specification, of which they are a part.' *Id.* at 979. As stated in *Vitronics*, the specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.' 90 F.3d at 1582.

From our review of the original Specification, we find that Appellants have identified specific definitions for a "single computer system" (FF 1) and a "computer system under test" (FF 2). Therefore, we shall construe a "single computer system" to include any system that is capable of working as either a server computer system or one of the client computer systems. In addition, we shall construe a "computer system under test" as any system that includes at least one processor and a memory.

Appellants argue that Fletcher does not disclose testing a single computer system (Br. 10). We find that only independent claims 1 and 9 recite the phrase "on a single computer system", the other independent claims, e.g., claims 3, 11, 17 and 27, merely recite "a computer system". Thus, any arguments regarding a "single computer system" shall apply only to those claims containing the limitation.

The Obviousness Rejection

We now consider the Examiner's rejection of claims 1-30 under 35 U.S.C. § 103(a) as being obvious over the combination of cited references.

"Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious." *Ex Parte Massingill*, No. 2003-0506, 2004 WL 1646421, at *3 (BPAI 2004). The question of obviousness is "based on underlying factual determinations including . . . what th[e] prior art teaches explicitly and inherently . . . ." *In re Zurko*, 258 F.3d 1379, 1383 (Fed. Cir. 2001) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613 (Fed. Cir. 1995)). "In

rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993) (citing *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)). "'A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.'" *In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976)).

Fletcher in view of Yu

Appellants contend that "Fletcher does not disclose testing a single computer system. Instead, Fletcher discloses monitoring communication performances in a communication network comprising communication systems communicatively coupled to each other with communication equipment." (Br. 10.) Appellants further contend that "the section of Yu cited by the Examiner does not disclose a single computer system emulating a server and a client. Instead, Yu discloses a local system and a remote system in which a client process is run on the local system and a server process is run on the remote system." (Br. 12.)

The Examiner found that "Fletcher does not disclose (re. Claims 1, 3, 9, 11, 17) a single computer system emulating a server and a client . . ." (Ans. 6). Thus, the Examiner relied upon Yu, and found that Yu discloses "a virtual network mechanism that allows a single host system to emulate multiple server and client processes, allowing data to be passed between said

processes, and executing server and client code in the same host system." *Id.* We agree.

While we agree with the Examiner that Fletcher may not disclose a single computer system emulating a server and a client (FF 4), as noted *supra*, not all of the claims contain such a limitation. Further, Fletcher discloses a method for monitoring performance in a communication network, including network performance and system performance using a client computer and a server computer (FF 4-6).

Yu discloses "host and hosted operating systems" configured within a single host system whereby a virtual network mechanism within the host functions as another LAN to provide access to port application programs using an emulator (FF 7-8). Yu's emulator is a multiprogrammed multiprocessor system that includes a listener module for initiating user tasks in response to user commands (FF 9-10). Yu further discloses that the emulator includes as a server portion (FF 11). In addition, Yu discloses that its system does not require that the other system or party to the communications be located in a physically separated computer system (FF 12).

Thus, we find that Yu discloses a single host system that includes an emulator and a virtual network mechanism that emulates a network configuration having a server and a client.

Therefore, we do not find that Appellants have shown error in the Examiner's rejection of illustrative claim 1. Instead, we find the Examiner has set forth a sufficient initial showing of obviousness.

Fletcher teaches away from a single computer

Appellants contend that "Fletcher teaches away from a single computer system emulating a server and a client because Fletcher teaches monitoring communication performance *in a communication network comprising communication systems communicatively coupled to each other with communication equipment*. . . . Fletcher uses separate computer systems for the client and the server and a physical communication network." (Br. 11.) We disagree.

We find that Fletcher discloses using a client computer and a server computer concurrently (FF 4). However, we do not find, and Appellants do not establish, the Fletcher criticizes, discredits, or otherwise discourages the use of a single computer that can emulator a server and a client computer. "[T]he prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternative because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed …" *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

No motivation to combine Fletcher and Yu

Appellants contend that "there is nothing in the teachings of Fletcher (monitoring communication performance in a communication network) that would motivate one to combine it with the teachings of executing programs that share a common communications protocol stack as disclosed in Yu." (Br. 9.) Appellants further contend that "the Examiner has taken the position, unsupported by the references of record, that Fletcher can be modified to include such limitations without affecting the performance of

the Fletcher system. There is no teaching or suggestion of such a modification in Fletcher." (Br. 10-11.)

The Examiner found that:

> Fletcher, in describing the computer system(s) being monitored . . . does not in any manner present any limitation(s) that would disqualify the computer system presented by Yu. . . . The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. . . . Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art.

(Ans. 16-17). We agree.

Fletcher discloses monitoring communication performance in a network (FF 5) and Yu discloses a virtual network mechanism that executes both server and client code on a single host system (FF 7). As such, we find that Yu's use of the virtual network mechanism running on a single host system would have suggested to the ordinary skilled artisan to use a single computer system to monitor communication performance as disclosed in Fletcher to *predictably result* in a single computer system that is capable of measuring communication performance by running both server and client code.

Therefore, Appellants' allegation that there is insufficient rationale to combine the cited references is not persuasive. The Supreme Court has held that in analyzing the obviousness of combining elements, a court need not find specific teachings, but rather may consider "the background knowledge possessed by a person having ordinary skill in the art" and "the inferences and creative steps that a person of ordinary skill in the art would employ." *See KSR Int'l*, at 1740-41. To be nonobvious, an improvement must be

"more than the predictable use of prior art elements according to their established functions." *Id.* at 1740. As set forth in the preceding paragraph, using a virtual network mechanism that executes both server and client code in a single host system is prior art teaching that is being used in a conventional computer system for the known purpose of conducting internetwork communications.

It follows that Appellants have not shown that the Examiner erred in concluding that the combination of Fletcher and Yu renders illustrative claim 1 unpatentable.

Fletcher, Yu and Cota-Robles

Appellants contend that "Cota-Robles does not teach or suggest the features missing from Fletcher and Yu" (Br. 13-15).

As detailed *supra*, the argued features were *not* found to be missing in the combination of Fletcher and Yu. Thus, Appellants argument that Cota-Robles does not cure the deficiencies of Fletcher and Yu is insufficient.

We find that the Appellants have failed to show error in the Examiner's rejection. Therefore, we affirm the rejection of claim 1 and of claims 2-30, which fall therewith.

VII. CONCLUSIONS

We conclude that Appellants have not shown that the Examiner erred in rejecting claims 1-30.

Thus, claims 1-30 are not patentable.

VIII. DECISION

In view of the foregoing discussion, we affirm the Examiner's rejection of claims 1-30.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2006).

AFFIRMED

pgc

INTEL CORPORATION
c/o INTELLEVATE, LLC
P.O. BOX 52050
MINNEAPOLIS MN 55402